

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A power control unit for an aircraft, the aircraft to include a control surface and a command path, the power control unit comprising:

- an override mechanism ~~adapted to be coupled to the control path;~~
- a first control member coupled to the override mechanism whereby the override mechanism ~~to attempt to transmit a~~ transfers a control command from the command path to the first control member;
- a second control member coupled to the control path whereby the command path, ~~transmits the~~ transfers the control command to the second control member;
- a first and a second actuator member coupled to the first and the second control members respectively such that the first and second control members respectively attempt to move to the first and second actuator members, ~~whereby the first and second actuator members to attempt to move~~ in response to the control command, whereby the override mechanism [[to]] allows the second control member to ~~allow~~ move the second actuator member ~~to move if~~ when the first control member resists moving in response to the control command;
- an actuator including a first piston coupled to the first actuator member and a second piston coupled to the second actuator member~~[[s]]~~ and adapted to be coupled to the control surface, whereby the actuator ~~[[to]] moves~~ the control surface in response to the command; ~~and~~
- a ~~unitary~~ housing containing the first and the second ~~actuator members~~ pistons;
- a first pressure sensor connected across the first piston to electronically sense a first delta pressure across the first piston;
- a second pressure sensor connected across the second piston to electronically sense a second delta pressure across the second piston; and
- a comparator adapted to electronically compare the first and second delta pressures and activate a standby actuator when the difference between the first and the

second delta pressures exceeds a predetermined threshold indicative of the first control member resisting moving in response to the control command.

2. (cancelled)

3. (currently amended) The power control unit according to claim ~~[[2]]~~ 1, further comprising: a load relief valve in fluid communication with the first ~~actuator member~~ piston and adapted to control a restricted fluid communication path between ~~the sides~~ an extend side and a retract side of the first ~~piston actuator member~~.

4. (currently amended) The power control unit according to claim ~~2~~ 1, ~~the aircraft further including a first and a second pressurized fluid source, further comprising:~~

~~the first and second actuator members including a first and a second piston respectively, the first and second pistons in fluid communication with the first and second pressurized fluid sources respectively; and~~

an orifice in fluid communication with the extend and retract sides of the first piston, whereby the orifice is adapted to bleed pressurized fluid across the first piston to alleviate force fight between the ~~actuator members~~ first and second pistons and to provide damping of the pressure across the first piston.

5. (currently amended) The power control unit according to claim 1, wherein the control surface ~~to be~~ comprises a rudder.

6. (currently amended) The power control unit according to claim 1, the override mechanism further including a spring which changes length ~~[[if]]~~ when the first actuator member resists moving in response to the control command, ~~whereby the override mechanism to allow the second actuator member to move.~~

7. (currently amended) An aircraft comprising:

a control surface;

a command path; and

a power control unit including an override mechanism adapted to be coupled to the control path;

a first control member coupled to the override mechanism whereby the override mechanism ~~to attempt to transmit a~~ transfers a control command from the command path to the first control member;

a second control member coupled to the control path whereby the command path ~~transmits the~~ transfers the control command to the second control member;

a first and a second actuator member coupled to the first and the second control members respectively such that the first and second control members respectively attempt to move to the first and second actuator members, whereby the first and second actuator members to attempt to move in response to the control command, whereby the override mechanism [[to]] allows the second control member to ~~allow~~ move the second actuator member ~~to move if~~ when the first control member resists moving in response to the control command;

an actuator including a first piston coupled to the first actuator member and a second piston coupled to the second actuator member~~[[s]]~~ and adapted to be coupled to the control surface, whereby the actuator [[to]] moves the control surface in response to the command; and

a ~~unitary~~ housing containing the first and the second ~~actuator members~~ pistons;

a first pressure sensor connected across the first piston to electronically sense a first delta pressure across the first piston;

a second pressure sensor connected across the second piston to electronically sense a second delta pressure across the second piston; and

a comparator adapted to electronically compare the first and second delta pressures and activate a standby actuator when the difference between the first and the second delta pressures exceeds a predetermined threshold indicative of the first control member resisting moving in response to the control command.

8. (cancelled)

9. (cancelled)

10. (currently amended) The aircraft according to claim ~~8~~⁷, further comprising a load relief valve in fluid communication with the first ~~actuator member~~ piston and adapted to control a restricted fluid communication path between ~~the sides~~ an extend side and a retract side of the first piston ~~actuator member~~.

11. (currently amended) The aircraft according to claim 7; ~~further comprising the wherein the~~ control surface ~~to be~~ comprises a rudder.

12. (currently amended) The aircraft according to claim 7, further comprising:

~~a first and a second pressurized fluid source;~~
~~the first and second actuator members including a first and a second piston~~
~~respectively, the first and second pistons in fluid communication with the first and~~
~~second pressurized fluid sources respectively; and~~
an orifice in fluid communication with the extend and retract sides of the first piston, whereby the orifice is adapted to bleed pressurized fluid across the first piston to alleviate force fight between the ~~actuator members~~ first and second pistons and to provide damping of the pressure across the first piston.

13. (currently amended) A method of controlling an aircraft, the aircraft to include a control surface, a command path, and a first and a second pressurized fluid source, the method comprising:

attempting to move a first ~~actuator member~~ piston with the first pressurized fluid source in response to a control command from the command path;

simultaneously attempting to move a second ~~actuator member~~ piston with the second pressurized fluid source in response to [[a]] the control command ~~from the command path~~, the first and second ~~actuator members~~ pistons housed within a common in a unitary housing;

activating an override mechanism to move the second piston when the first piston resists movement ~~moving the control surface if either attempt is successful~~;

electronically sensing a first delta pressure across the first piston;

electronically sensing a second delta pressure across the second piston;

comparing the first and second delta pressures to determine a delta differential pressure between the first and second delta pressures; and

activating a standby power control system when the delta differential exceeds a predetermined threshold.

14. (cancelled)

15. (cancelled)

16. (currently amended) The method according to claim 13, further comprising controlling a restricted fluid communication path between ~~the sides~~ an extend side and a retract side of the first ~~actuator member~~ piston whereby the fluid pressure across the

~~first actuator member is reduced~~ to alleviate force fight between the first and second pistons and to provide damping of the pressure across the first piston.

17. (currently amended) The method according to claim 13, wherein the control surface ~~[[is]]~~ comprises a rudder.

18. through 23. (cancelled)